AUTHOR INDEX

PAGE

Abdul-Matin, A.K.M., see Beaumont and Abdul-Matin 445
Acuña, J.L. Summer vertical distribution of appendicularians in the central Cantabrian Sea (Bay of Biscay) 585
Airriess, C.N., McMahon, B.R., McGaw, I.J. and Bourne, G.B. Application and *in situ* calibration of a pulsed-Doppler flowmeter for blood flow measurement in crustaceans ... 455
Anderson, M.J., *see* Underwood and Anderson 563
Atkinson, R.J.A., *see* Nickell and Atkinson 963
Backeljau, T., Bouchet, P., Gofas, S. and Bruyn, L. de, Genetic variation, systematics and distribution of the venerid clam *Chamelea gallina* 211
Bagley, P.M., Smith, A. and Priede, I.G. Tracking movements of deep demersal fishes in the Porcupine Seabight, north-east Atlantic Ocean 473
See also Priede *et al.* 481
Barnes, D.K.A. Communities of epibiota on two erect species of Antarctic Bryozoa 863
Barnes, R.S.K. Investment in eggs in lagoonal *Hydrobia ventrosa* and life-history strategies in north-west European *Hydrobia* species 637
Bartels-Hardege, H.D., *see* Hardege *et al.* 903
Beare, D.J. and Moore, P.G. Observations on the biology of a rare British marine amphipod: *Monoculodes gibbosus* (Crustacea: Amphipoda: Oedicerotidae) 193
Beaumont, A.R. and Abdul-Matin, A.K.M. Differences in morphology, survival and size between self- and cross-fertilized larvae of *Mytilus galloprovincialis* 445
Berrow, S.D. Incidental capture of elasmobranchs in the bottom-set gill-net fishery off the south coast of Ireland 837
Billett, D.S.M., *see* Tyler *et al.* 383
Bonotto, S. Developmental biology of *Acetabularia* 93
Bouchet, P., *see* Backeljau *et al.* 211
Bourne, G.B., *see* Airriess *et al.* 455
Brownlee, C. Developmental biology of marine organisms 1
Bruyn, L. de, *see* Backeljau *et al.* 211
Burgess, P.J. and Matthews, R.A. *Cryptocaryon irritans* (Ciliophora): photoperiod and transmission in marine fish 535
Burke, R.D., *see* Moss *et al.* 61
Burkill, P.H.
See Leakey *et al.* 849
See Stoecker *et al.* 427
Carr, M.R., *see* Lowe *et al.* 225
Cervello, M., *see* Yokota *et al.* 27
Chisholm, J.R.S. and Smith, V.J. Variation of antibacterial activity in the haemocytes of the shore crab, *Carcinus maenas*, with temperature 979
Ciani, G., *see* Holden *et al.* 287
Clare, A.S., Freet, R.K. and McClary, M. Jr. On the antennular secretion of the cyprid of *Balanus amphitrite amphitrite*, and its role as a settlement pheromone 243
Clare, A.S. and Nott, J.A. Scanning electron microscopy of the fourth antennular segment of *Balanus amphitrite amphitrite* 967
Claridge, P.N. and Potter, I.C. Abundance, seasonality and size of Atlantic salmon smolts entrained on power station intake screens in the Severn Estuary 527
Coffman, J.A. and Davidson, E.H. Regulation of gene expression in the sea urchin embryo 17
Collins, M.B., *see* Grochowski and Collins 739
Coombs, S.H. Identification of eggs of hake, *Merluccius merluccius* 449
Creasey, S., *see* Priede *et al.* 481

PAGE

Dauvin, J.-C., Iglesias, A. and Lorgeré, J.-C. Circalittoral suprabenthic coarse sand community from the western English Channel ... 543
See also Thiébaut *et al.* ... 129
Davenport, J.
A cleaning association between the oceanic crab *Planes minutus* and the loggerhead sea turtle *Caretta caretta* ... 735
Observations on the behaviour, salinity relations and colour change of *Ligia italica* from Madeira ... 959
See also Hoare and Davenport ... 971
See also Thomason *et al.* ... 823
Davidson, E.H., *see* Coffman and Davidson ... 17
Diaz, R.J., *see* Llansó and Diaz ... 143
Eaton, D.R., *see* Moore *et al.* ... 451
Eckelbarger, K., *see* Tyler *et al.* ... 383
Edmonds, J.S., Shibata, Y., Prince, R.I.T., Francesconi, K.A. and Morita, M. Arsenic compounds in tissues of the leatherback turtle, *Dermochelys coriacea* ... 463
Edwards, E.S., *see* Stoecker *et al.* ... 427
Eno, N.C. The morphometrics of cephalopod gills ... 687
Fives, J.M., *see* King *et al.* ... 513
Francesconi, K.A., *see* Edmonds *et al.* ... 463
Freet, R.K., *see* Clare *et al.* ... 243
Gallego, A. Changes in the swimming behaviour of larval herring in response to two different prey densities ... 955
Garcia-Fernàndez, J., *see* Holland *et al.* ... 49
Gaspar, M.B., Richardson, C.A. and Monteiro, C.C. The effects of dredging on shell formation in the razor clam *Ensis siliqua* from Barrinha, southern Portugal ... 927
Gili, J.-M., *see* Pagès *et al.* ... 873
Gofas, S., *see* Backeljau *et al.* ... 211
Green, J.C., *see* Jordan and Green ... 149
Grochowski, N.T.L. and Collins, M.B. Wave activity on the sea-bed of the English Channel .. 739
Guillou, J.
See Laruelle *et al.* ... 351
See Lumingas and Guillou ... 671
Haddad, A.M.G. and Ormond, R.F.G. Use of photography and image analysis for *in situ* monitoring of growth rates of intertidal fucoid algae ... 727
Hamel, J.-F. and Mercier, A. New distribution and host record for the starfish parasite *Dendrogaster* (Crustacea: Ascothoracida) ... 419
Hannah, F., Rogerson, A. and Laybourn-Parry, J. Respiration rates and biovolumes of common benthic Foraminifera (Protozoa) ... 301
Hardege, J.D., Bartels-Hardege, H.D., Yang, Y., Wu, B.L. , Zhu, M.Y. and Zeeck, E. Environmental control of reproduction in *Perinereis nuntia* var. *brevicirrus* ... 903
Hastie, L.C., Joy, J.B., Pierce, G.J. and Yau, C. Reproductive biology of *Todaropsis eblanae* (Cephalopoda: Ommastrephidae) in Scottish waters ... 367
Haugen, E., *see* Stoecker *et al.* ... 427
Hayashi, I. and Yamane, S. On a probable sense organ newly found in some eunicid polychaetes ... 765
Henderson, S.M. and Richardson, C.A. A comparison of the age, growth rate and burrowing behaviour of the razor clams, *Ensis siliqua* and *E. ensis* ... 939
Herring, P.J. and Munk, O. The escal light gland of the deep-sea anglerfish *Haplophryne mollis* (Pisces: Ceratioidei) with observations on luminescence control ... 747

PAGE

Hoare, K. and Davenport, J. Size-related variation in the sensitivity of the mussel, *Mytilus edulis*, to copper 971
Holden, J.A., Pipe, R.K., Quaglia, A. and Ciani, G. Blood cells of the arcid clam, *Scapharca inaequivalvis* 287
Holland, L.Z., *see* Holland *et al.* 49
Holland, N.D., *see* Holland *et al.* 49
Holland, P.W.H., Garcia-Fernàndez, J., Holland, L.Z., Williams, N.A. and Holland, N.D. The molecular control of spatial patterning in amphioxus 49
Horiguchi, T., Shiraishi, H., Shimizu, M. and Morita, M. Imposex and organotin compounds in *Thais clavigera* and *T. bronni* in Japan 651
Horne, Z., *see* Johnston and Horne 79
Hughes, D.J., *see* Turley and Hughes 259
Iglesias, A., *see* Dauvin *et al.* 543
Jeffery, W.R. A model for ascidian development and developmental modifications during evolution 35
Johnson, M.A. and Le Pennec, M. The development of the female gamete in the endosymbiont-bearing bivalve *Loripes lucinalis* 233
Johnston, D.J. Functional morphology of the membranous lobe within the preoral cavity of *Thenus orientalis* (Crustacea: Scyllaridae) 787
Johnston, I.A. and Horne, Z. Immunocytochemical investigations of muscle differentiation in the Atlantic herring (*Clupea harengus*: Teleostei) 79
Jones, M.B.
See Lawson *et al.* 771
See Rowden and Jones 623
Jordan, R.W. and Green, J.C. A check-list of the extant Haptophyta of the world 149
Joy, J.B., *see* Hastie *et al.* 367
Kanamori, K. and Michibata, H. Raman spectroscopic study of the vanadium and sulphate in blood cell homogenates of the ascidian, *Ascidia gemmata* 279
Kear, A.J. Morphology and function of the mandibular muscles in some coleoid cephalopods 801
King, P.A., Fives, J.M. and McGrath, D. Reproduction, growth and feeding of the dragonet, *Callionymus lyra* (Teleostei: Callionymidae), in Galway Bay, Ireland 513
Lagadeuc, Y., *see* Thiébaut *et al.* 129
Laruelle, F., Guillou, J. and Paulet, Y.M. Reproductive pattern of the clams, *Ruditapes decussatus* and *R. philippinarum* on intertidal flats in Brittany 351
Lawson, S.L., Jones, M.B. and Moate, R.M. Structural variability and distribution of cells in a posterior gill of *Carcinus maenas* (Decapoda: Brachyura) 771
Laybourn-Parry, J., *see* Hannah *et al.* 301
Leakey, R.J.G., Burkill, P.H. and Sleigh, M.A. Ciliate growth rates from Plymouth Sound: comparison of direct and indirect estimates 849
Lechapt, J.-P. *Tharyx retierei*, a new species of Cirratulidae (Annelida: Polychaeta) from the Atlantic coast of Morocco 413
Le Pennec, M., *see* Johnson and Le Pennec 233
Llansó, R.J. and Diaz, R.J. Tolerance to low dissolved oxygen by the tubicolous polychaete *Loimia medusa* 143
Lorgeré, J.-C., *see* Dauvin *et al.* 543
Lowe, D.M., Salkeld, P.N. and Carr, M.R. The effect of geographical location on the cellular composition of the mantle tissue of the mussel, *Mytilus edulis* 225
Lumingas, L.J.L. and Guillou, M. Growth zones and back-calculation for the sea urchin, *Sphaerechinus granularis*, from the Bay of Brest, France 671

PAGE

Lyndon, A.R. and Vidal-Martinez, V.M. The microhabitat and morphology of *Grubea cochlear* on the gills of mackerel from Lyme Bay, southern England 731
Massutí, E., *see* Stefanescu *et al.* 499
Matranga, V., *see* Yokota *et al.* 27
Matthews, R.A., *see* Burgess and Matthews 535
McClary, M. Jr, *see* Clare *et al.* 243
McDougall, A., *see* Swann *et al.* 3
McGaw, I.J., *see* Airriess *et al.* 455
McGrath, D.
See King *et al.* 513
See Myers and McGrath 403
McMahon, B.R., *see* Airriess *et al.* 455
Mercier, A., *see* Hamel and Mercier 419
Merrett, N.R., *see* Priede *et al.* 481
Metillo, E.B. and Ritz, D.A. Comparative foregut functional morphology of three co-occurring mysids (Crustacea: Mysidacea) from south-eastern Tasmania 323
Michaels, A.E., *see* Stoecker *et al.* 427
Michel, H.B. Antarctic Megacalanidae (Copepoda: Calanoida) and the distribution of the family 175
Michibata *see* Kanamori and Michibata 279
Moate, R.M., *see* Lawson *et al.* 771
Moore, A., Pickett, G.D. and Eaton, D.R. A preliminary study on the use of acoustic transmitters for tracking juvenile bass (*Dicentrarchus labrax*) in an estuary 451
Moore, P.G., *see* Beare and Moore. 193
Monteiro, C.C., *see* Gaspar *et al* 927
Morales-Nin, B., *see* Stefanescu *et al.* 499
Morita, M.
See Edmonds *et al.* 463
See Horiguchi *et al.* 651
Morritt, D., *see* Spicer *et al.* 313
Moss, C., Burke, R.D. and Thorndyke, M.C. Immunocytochemical localization of the neuropeptide S1 and serotonin in larvae of the starfish *Pisaster ochraceus* and *Asterias rubens* 61
Munk, O., *see* Herring and Munk 747
Myers, A.A. and McGrath, D. *Ampelisca dalmatina* and *A. provincialis* (Amphipoda: Gammaridea) in Irish waters 403
Nakano, E., *see* Yokota *et al.* 27
Neal, A.L. and Yule, A.B. The tenacity of *Elminius modestus* and *Balanus perforatus* cyprids to bacterial films grown under different shear regimes 251
Nickell, L.A. and Atkinson, R.J.A. Observations on the behaviour of *Thalassema thalassemum* (Echiura: Echiuridae) 963
Nigro, M. Mercury and selenium localization in macrophages of the striped dolphin, *Stenella coeruleoalba* 975
Nott, J.A., *see* Clare and Nott 967
Ormond, R.F.G., *see* Haddad and Ormond 727
Ospovat, M., *see* Raineri and Ospovat 73
Pagès, F., Pugh, P.R. and Gili, J.-M. Macro- and megaplanktonic cnidarians collected in the eastern part of the Weddell Gyre during summer 1979 873
Pankhurst, P.M. Age-related changes in the visual acuity of larvae of New Zealand snapper, *Pagrus auratus* 337

PAGE

Paulet, Y.M., *see* Laruelle *et al.* 351
Pickett, G.D., *see* Moore *et al.* 451
Pierce, G.J., *see* Hastie *et al.* 367
Pingree, R.D. Winter warming in the southern Bay of Biscay and Lagrangian eddy kinematics from a deep-drogued Argos buoy 107
Pipe, R.K., *see* Holden *et al.* 287
Potter, I.C., *see* Claridge and Potter 527
Priede, I.G., Bagley, P.M., Smith, A., Creasey, S. and Merrett, N.R. Scavenging deep demersal fishes of the Porcupine Seabight, north-east Atlantic: observations by baited camera, trap and trawl 481
See also Bagley *et al.* 473
Prince, R.I.T., *see* Edmonds *et al.* 463
Pugh, P.R., *see* Pagès *et al.* 873
Quaglia, A., *see* Holden *et al.* 287
Raineri, M. and Ospovat, M. The initial development of gangliar rudiments in a posterior position in *Mytilus galloprovincialis* (Mollusca: Bivalvia) 73
Rau, G.H., *see* Southward *et al.* 265
Richardson, C.A., *see* Gaspar *et al.* 927
Richardson, C.A., *see* Henderson and Richardson 939
Ritz, D.A., *see* Metillo and Ritz 323
Rogerson, A.
See Hannah *et al.* 301
See Thomason *et al.* 823
Rowden, A.A. and Jones, M.B. A contribution to the biology of the burrowing mud shrimp, *Callianassa subterranea* (Decapoda: Thalassinidea) 623
Salkeld, P.N., *see* Lowe *et al.* 225
Shibata, Y., *see* Edmonds *et al.* 463
Shimizu, M., *see* Horiguchi *et al.* 651
Shiraishi, H., *see* Horiguchi *et al.* 651
Sieracki, M.E., *see* Stoecker *et al.* 427
Simkiss, K. and Taylor, M.G. The formation of apatite from crab faecal pellets 459
Sleigh, M.A., *see* Leakey *et al.* 849
Smith, A.
See Bagley *et al.* 473
See Priede *et al.* 481
Smith, V.J., *see* Chisholm and Smith 979
Solé-Cava, A.M., Thorpe, J.P. and Todd, C.D. High genetic similarity between geographically distant populations in a sea anemone with low dispersal capabilities 895
Southward, A.J., Southward, E.C., Spiro, B., Rau, G.H. and Tunnicliffe, V. $^{13}C/^{12}C$ of organisms from Juan de Fuca Ridge hydrothermal vents: a guide to carbon and food sources 265
Southward, E.C., *see* Southward *et al.* 265
Spicer, J.I., Morritt, D. and Taylor, A.C. Effect of low temperature on oxygen uptake and haemolymph ions in the sandhopper *Talitrus saltator* (Crustacea: Amphipoda) 313
Spiro, B., *see* Southward *et al.* 265
Sprung, M. Observations on the life cycle of *Abra ovata* on an intertidal mud flat in Portugal 919
Stefanescu, C., Morales-Nin, B. and Massutí, E. Fish assemblages on the slope in the Catalan Sea (western Mediterranean): influence of a submarine canyon 499

PAGE

Stoecker, D.K., Sieracki, M.E., Verity, P.G., Michaels, A.E., Haugen, E., Burkill, P.H. and Edwards, E.S. Nanoplankton and protozoan microzooplankton during the JGOFS North Atlantic Bloom Experiment: 1989 and 1990 427
Swann, K., McDougall, A. and Whitaker, M. Calcium signalling at fertilization 3
Taylor, A.C., *see* Spicer *et al.* 313
Taylor, M.G., *see* Simkiss and Taylor 459
Thiébaut, E., Dauvin, J.-C. and Lagadeuc, Y. Horizontal distribution and retention of *Owenia fusiformis* larvae (Annelida: Polychaeta) in the Bay of Seine 129
Thomason, J.C., Davenport, J. and Rogerson, A. Antifouling performance of the embryo and eggcase of the dogfish *Scyliorhinus canicula* 823
Thorndyke, M.C., *see* Moss *et al.* 61
Thorpe, J.P., *see* Solé-Cava *et al.* 895
Todd, C.D.
See Solé-Cava *et al.* 895
See Turner and Todd, ... 603
Tunnicliffe, V., *see* Southward *et al.* 265
Turley, C.M. and Hughes, D.J. The effect of storage temperature on the enumeration of epifluorescence-detectable bacterial cells in preserved sea-water samples 259
Turner, S.J. and Todd, C.D. Competition for space in encrusting bryozoan assemblages: the influence of encounter angle, site and year 603
Tyler, P.A., Eckelbarger, K. and Billett, D.S.M. Reproduction in *Bathyplotes natans* (Holothurioidea: Synallactidae) from bathyal depths in the north-east and western Atlantic 383
Tzioumis, V. Bryozoan stolonal outgrowths: a role in competitive interactions? 203
Underwood, A.J. and Anderson, M.J. Seasonal and temporal aspects of recruitment and succession in an intertidal estuarine fouling assemblage 563
Verity, P.G., *see* Stoecker *et al.* 427
Vidal-Martinez, V.M., *see* Lyndon and Vidal-Martinez 731
Whitaker, M., *see* Swann *et al.* 3
Williams, N.A., *see* Holland *et al.* 49
Wong, J.T.Y. and Wong, Y.H. Indoleamine-induced encystment in dinoflagellates 467
Wong, Y.H., *see* Wong and Wong 467
Wu, B.L., *see* Hardege *et al.* 903
Yamane, S., *see* Hayashi and Yamane 765
Yang, Y., *see* Hardege *et al.* 903
Yau, C., *see* Hastie *et al.* 367
Yokota, Y., Matranga, V., Zito, F., Cervello, M. and Nakano, E. Nectins in sea urchin eggs and embryos 27
Yule, A.B., *see* Neal and Yule 251
Zeeck, E., *see* Hardege *et al.* 903
Zhu, M.Y. *see* Hardege *et al.* 903
Zito, F., *see* Yokota *et al.* 27

SUBJECT INDEX

PAGE

Algae
Check-list of the extant Haptophyta of the world 149-174
Developmental biology of *Acetabularia* 93-106
Indoleamine-induced encystment in dinoflagellates 467-469
In situ monitoring of growth rates of intertidal fucoid algae 727-730
Antarctic
Antarctic Megacalanidae and the distribution of the family 175-192
Communities of epibiota on two erect species of Antarctic Bryozoa 863-872
Macro- and megaplanktonic cnidarians from the Weddell Gyre 873-894
Bacteria
Antibacterial activity in the haemocytes of the shore crab 979-982
Antifouling performance of the embryo and eggcase of the dogfish 823-836
Development of the female gamete in an endosymbiont-bearing bivalve 233-242
Storage temperature and enumeration bacterial cells in preserved sea-water 259-262
Tenacity of cyprids to bacterial films grown under different shear regimes 251-257
The escal light gland of the deep-sea anglerfish 747-763
Behaviour
Age, growth rate and burrowing behaviour of razor clams 939-954
Behaviour of *Thalassema thalassemum* 963-966
Behaviour, salinity relations and colour change of *Ligia* from Madeira 959-962
Swimming behaviour of larval herring and prey density 955-958
Tolerance to low dissolved oxygen by a polychaete 143-148
Benthos and Sediments
Age, growth rate and burrowing behaviour of razor clams 939-954
Behaviour of *Thalassema thalassemum* 963-966
Circalittoral suprabenthic coarse sand community from English Channel 543-562
Role of the antennular secretion of a cyprid as a settlement pheromone 243-250
Seasonal recruitment and succession in an estuarine fouling assemblage 563-584
Wave activity on the sea-bed of the English Channel 739-742
Biochemistry
Blood cells of the arcid clam, *Scapharca inaequivalvis* 287-299
Formation of apatite from crab faecal pellets 459-462
Herring muscle development: immunocytochemistry 79-91
Indoleamine-induced encystment in dinoflagellates 467-469
Nectins in sea urchin eggs and embryos 27-34
Neuropeptides and development in echinoderm larvae 61-71
Raman spectroscopy of the vanadium and sulphate in ascidian blood 279-286
Bioluminescence
The escal light gland of the deep-sea anglerfish 747-763
Blood
Blood cells of the arcid clam, *Scapharca inaequivalvis* 287-299
Low temperature, oxygen uptake and haemolymph ions in sandhopper 313-321
Pulsed-Doppler flowmeter for blood flow measurement in crustaceans 455-458
Raman spectroscopy of the vanadium and sulphate in ascidian blood 279-286
Blooms
Nanoplankton and protozoan microzooplankton in North Atlantic bloom 427-443
Carbon
$^{13}C/^{12}C$ of organisms from hydrothermal vents: carbon and food sources 265-278

PAGE

Check-List
Check-list of the extant Haptophyta of the world 149-174
Communities
Ciliate growth rates from Plymouth Sound 849-861
Circalittoral suprabenthic coarse sand community from English Channel 543-562
Communities of epibiota on two erect species of Antarctic Bryozoa 863-872
Competition for space in encrusting bryozoan assemblages 603-622
Fish assemblages on the slope in the Catalan Sea 499-512
Macro- and megaplanktonic cnidarians from the Weddell Gyre 873-894
Seasonal recruitment and succession in an estuarine fouling assemblage 563-584
Summer vertical distribution of appendicularians in the Cantabrian Sea 585-601
Competition
Bryozoan stolonal outgrowths: a role in competitive interactions 203-210
Competition for space in encrusting bryozoan assemblages 603-622
Deep Sea
Reproduction in a bathyal holothuroid 383-402
Scavenging deep demersal fishes of the Porcupine Seabight 481-498
Tracking deep demersal fishes in the Porcupine Seabight 473-480
Development, Growth and Maturation
Age, growth rate and burrowing behaviour of razor clams 939-954
Age-related changes in visual acuity of larvae of New Zealand snapper 337-349
Antifouling performance of the embryo and eggcase of the dogfish 823-836
Ascidian development and evolution 35-48
Calcium signalling at fertilization 3-16
Development of gangliar rudiments in *Mytilus* 73-77
Development of the female gamete in an endosymbiont-bearing bivalve 233-242
Developmental biology of *Acetabularia* 93-106
Developmental biology of marine organisms 1-2
Differences between self- and cross-fertilized larvae of *Mytilus galloprovincialis* 445-448
Effects of dredging on shell formation in the razor clam 927-938
Gene regulation in sea urchin embryo 17-26
Growth zones and back-calculation for a sea urchin 671-686
Herring muscle development: immunocytochemistry 79-91
Investment in eggs in lagoonal *Hydrobia ventrosa* 637-650
Molecular control of spatial patterning in Amphioxus 49-60
Nectins in sea urchin eggs and embryos 27-34
Reproduction, growth and feeding of the dragonet, in Galway Bay 513-526
Role of the antennular secretion of a cyprid as a settlement pheromone 243-250
Size and sensitivity of the mussel to copper 971-973
Swimming behaviour of larval herring and prey density 955-958
Ecology and Distribution
Ampelisca dalmatina and *A. provincialis* (Amphipoda) in Irish waters 403-412
Antarctic Megacalanidae and the distribution of the family 175-192
Atlantic salmon smolts on power station intake screens in the Severn Estuary 527-534
Biology of the burrowing mud shrimp, *Callianassa subterranea* 623-635
Bryozoan stolonal outgrowths: a role in competitive interactions 203-210
Cleaning association between an oceanic crab and a sea turtle 735-737
Effect of geographical location on the mantle tissue of a mussel 225-232
Environmental control of reproduction in *Perinereis nuntia* 903-918
Fish assemblages on the slope in the Catalan Sea 499-512

PAGE

Ecology and Distribution *(continued)*
Genetic variation, systematics and distribution of a venerid clam 211-223
Horizontal distribution of *Owenia fusiformis* larvae in the Bay of Seine 129-142
Incidental capture of elasmobranchs in a gill-net fishery in Ireland 837-847
Life cycle of *Abra ovata* in Portugal 919-925
Macro- and megaplanktonic cnidarians from the Weddell Gyre 873-894
New distribution and host record for the starfish parasite *Dendrogaster* 419-425
Observations on the biology of a rare British marine amphipod 193-201
Reproductive biology of *Todaropsis eblanae* in Scottish waters 367-382
Reproductive pattern of two clams on intertidal flats in Brittany 351-366
Summer vertical distribution of appendicularians in the Cantabrian Sea 585-601

Evolution
Ascidian development and evolution 35-48

Feeding and Nutrition
$^{13}C/^{12}C$ of organisms from hydrothermal vents: carbon and food sources 265-278
Comparative foregut functional morphology of mysids from Tasmania 323-336
Formation of apatite from crab faecal pellets 459-462
Function of mandibular muscles in some coleoid cephalopods 801-822
Functional morphology of membranous lobe of *Thenus orientalis* 787-800
Reproduction, growth and feeding of the dragonet, in Galway Bay 513-526
Scavenging deep demersal fishes of the Porcupine Seabight 481-498
Swimming behaviour of larval herring and prey density 955-958

Histology and Histochemistry
A probable sense organ newly found in some eunicid polychaete 765-770
Arsenic compounds in tissues of the leatherback turtle 463-466
Blood cells of the arcid clam, *Scapharca inaequivalvis* 287-299
Development of gangliar rudiments in *Mytilus* 73-77
Effect of geographical location on the mantle tissue of a mussel 225-232
Mercury and selenium in macrophages of the striped dolphin 975-978
Raman spectroscopy of the vanadium and sulphate in ascidian blood 279-286
Structure and distribution of cells in gill of *Carcinus maenas* 771-785
The escal light gland of the deep-sea anglerfish 747-763
The fourth antennular segment of *Balanus amphitrite amphitrite* 967-970

Hydrothermal Vents
$^{13}C/^{12}C$ of organisms from hydrothermal vents: carbon and food sources 265-278

Larval Settlement
Role of the antennular secretion of a cyprid as a settlement pheromone 243-250
Tenacity of cyprids to bacterial films grown under different shear regimes 251-257

Migration and Movements
Genetic similarity in distant populations of a sea anemone 895-902
Orientation and migration in the sea. Abstracts: 707-725
Tracking deep demersal fishes in the Porcupine Seabight 473-480
Tracking juvenile bass using acoustic transmitters 451-454

Molecular Biology and Genetics
Differences between self- and cross-fertilized larvae of *Mytilus galloprovincialis* 445-448
Gene regulation in sea urchin embryo 17-26
Genetic similarity in distant populations of a sea anemone 895-902
Genetic variation, systematics and distribution of a venerid clam 211-223
Molecular control of spatial patterning in Amphioxus 49-60

PAGE

Morphology and Morphometrics
Ampelisca dalmatina and *A. provincialis* (Amphipoda) in Irish waters 403-412
Biovolumes of common benthic Foraminifera 301-312
Comparative foregut functional morphology of mysids from Tasmania 323-336
Effects of dredging on shell formation in the razor clam 927-938
Functional morphology of membranous lobe of *Thenus orientalis* 787-800
Identification of eggs of hake, *Merluccius merluccius* 449-450
Microhabitat and morphology of *Grubea cochlear* on gills of mackerel 731-734
Morphology of mandibular muscles in some coleoid cephalopods 801-822
Observations on the biology of a rare British marine amphipod 193-201
The morphometrics of cephalopod gills 687-706
New Species and Genera
New species of polychaete from the Atlantic coast of Morocco 413-418
Tharyx retierei, sp. nov 414
Oxygen Concentration
Oxygen uptake and haemolymph ions in the sandhopper 313-321
Tolerance to low dissolved oxygen by a polychaete 143-148
Parasitology
Microhabitat and morphology of *Grubea cochlear* on gills of mackerel 731-734
New distribution and host record for the starfish parasite *Dendrogaster* 419-425
Photoperiod and transmission of *Cryptocaryon irritans* in marine fish 535-542
Physical Oceanography
Drifting buoy, temperature and eddies in the Bay of Biscay 107-128
Wave activity on the sea-bed of the English Channel 739-742
Plankton
Nanoplankton and protozoan microzooplankton in North Atlantic bloom 427-443
Pollution and Toxicity
Arsenic compounds in tissues of the leatherback turtle 463-466
Imposex and organotin compounds in *Thais clavigera* and *T. bronni* in Japan 651-669
Mercury and selenium in macrophages of the striped dolphin 975-978
Size and sensitivity of the mussel to copper 971-973
Production
Ciliate growth rates from Plymouth Sound 849-861
Reproduction and Life History
Biology of the burrowing mud shrimp, *Callianassa subterranea* 623-635
Environmental control of reproduction in *Perinereis nuntia* 903-918
Imposex and organotin compounds in *Thais clavigera* and *T. bronni* in Japan 651-669
Life cycle of *Abra ovata* in Portugal 919-925
Life-history strategies in north-west European *Hydrobia* species 637-650
Reproduction, growth and feeding of the dragonet, in Galway Bay 513-526
Reproduction in a bathyal holothuroid 383-402
Reproductive biology of *Todaropsis eblanae* in Scottish waters 367-382
Reproductive pattern of two clams on intertidal flats in Brittany 351-366
Respiration
Respiration rates and biovolumes of common benthic Foraminifera 301-312
The morphometrics of cephalopod gills 687-706
Rhythmicity and Seasonality
Atlantic salmon smolts on power station intake screens in the Severn Estuary 527-534
Environmental control of reproduction in *Perinereis nuntia* 903-918
Seasonal recruitment and succession in an estuarine fouling assemblage 563-584
Summer vertical distribution of appendicularians in the Cantabrian Sea 585-601

PAGE

Salinity and Osmoregulation
Behaviour, salinity relations and colour change of *Ligia* from Madeira 959-962
Structure
A probable sense organ newly found in some eunicid polychaete 765-770
Functional morphology of membranous lobe of *Thenus orientalis* 787-800
Structure and distribution of cells in gill of *Carcinus maenas* 771-785
The escal light gland of the deep-sea anglerfish 747-763
The fourth antennular segment of *Balanus amphitrite amphitrite* 967-970
Taxonomy
Ampelisca dalmatina and *A. provincialis* (Amphipoda) in Irish waters 403-412
Genetic variation, systematics and distribution of a venerid clam 211-223
New species of polychaete from the Atlantic coast of Morocco 413-418
Techniques and Methodology
Ciliate growth rates: comparison of direct and indirect estimates 849-861
Deep demersal fishes observed by baited camera, trap and trawl 481-498
Growth zones and back-calculation for a sea urchin 671-686
Identification of eggs of hake, *Merluccius merluccius* 449-450
Photography and image analysis for monitoring growth rates of algae 727-730
Pulsed-Doppler flowmeter for blood flow measurement in crustaceans 455-458
Raman spectroscopy of the vanadium and sulphate in ascidian blood 279-286
Storage temperature and enumeration bacterial cells in preserved sea-water 259-262
Tracking deep demersal fishes with acoustic transponders 473-480
Use of acoustic transmitters for tracking juvenile bass 451-454
Temperature Effects
Effect of temperature on antibacterial activity in shore crab haemocytes 979-982
Low temperature, oxygen uptake and haemolymph ions in sandhopper 313-321
Storage temperature and enumeration bacterial cells in preserved sea-water 259-262
Vision and Light
Age-related changes in visual acuity of larvae of New Zealand snapper 337-349
Photoperiod and transmission of *Cryptocaryon irritans* in marine fish 535-542
Water Movements
Drifting buoy, temperature and eddies in the Bay of Biscay 107-128
Horizontal distribution of *Owenia fusiformis* larvae in the Bay of Seine 129-142
Nanoplankton and protozoan microzooplankton in North Atlantic bloom 427-443
Tenacity of cyprids to bacterial films grown under different shear regimes 251-257